AMENDMENT(S) TO THE CLAIMS

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Currently Amended) ~~The method of claim 6,~~ A method of performing printhead

maintenance firing in an ink jet printer that has a printhead carrier that carries an ink jet

printhead, said ink jet printer having a waste ink receptacle, comprising the steps of:

decelerating said printhead carrier from a first velocity after printing print data; and

5   controlling a firing of said printhead during said decelerating in accordance with

maintenance data so that ink droplets ejected from said printhead during said decelerating are

received by said waste ink receptacle,

said maintenance data being appended to said print data for a particular printing swath

pass for serialization to said printhead; and

10   wherein a timing segment is interposed between said print data and said maintenance data;

and

wherein a length (L) of said waste ink receptacle, which is positioned to begin at a

predetermined location, is determined by the formula:

$$L = [(Dgap /Vd) \times Vc] + (N/Dpi), \text{ wherein:}$$

15   Dgap is a gap distance from said printhead to a surface of said waste ink

receptacle;

     Vd is a droplet velocity of ink droplets ejected from said printhead;

     Vc is a carrier velocity of said printhead carrier;

     N is the number of spit fires per nozzle; and

20   Dpi is the resolution.

    8. (Original) The method of claim 7, said predetermined location being outside a

print zone of said ink jet printer, and in relation to an edge of a sheet of print media.

    9. (Original) The method of claim 7, said print data being printed at said carrier

velocity Vc of said printhead carrier.

    10. (Canceled)

    11. (Canceled)

    12. (Canceled)

    13. (Canceled)

    14. (Currently Amended) ~~The method of claim 11~~ A method of performing printhead

maintenance firing in an ink jet printer that has a printhead carrier that carries an ink jet

printhead, said ink jet printer having a waste ink receptacle, comprising the steps of:

    receiving print data in a form of print data segments;

5   generating a timing segment and a maintenance segment;

        appending said timing segment and said maintenance segment to said print data segments;

        accelerating said printhead carrier to a first velocity;

        serializing said print data segments, said timing segment, and said maintenance segment to

said printhead;

10   decelerating said printhead carrier during said maintenance segment; and

        controlling a firing of said printhead in accordance with data in said maintenance segment

so that ink droplets ejected from said printhead during said decelerating are received by said waste

ink receptacle, said print data segments and said timing segment being serialized to said printhead

when said printhead carrier is moving at said first velocity.

        15. (Canceled)

        16. (Currently Amended) ~~The method of claim 11~~ A method of performing printhead

maintenance firing in an ink jet printer that has a printhead carrier that carries an ink jet

printhead, said ink jet printer having a waste ink receptacle, comprising the steps of:

        receiving print data in a form of print data segments;

5   generating a timing segment and a maintenance segment;

        appending said timing segment and said maintenance segment to said print data segments;

        accelerating said printhead carrier to a first velocity;

        serializing said print data segments, said timing segment, and said maintenance segment to

said printhead;

10   decelerating said printhead carrier during said maintenance segment; and

controlling a firing of said printhead in accordance with data in said maintenance

segment so that ink droplets ejected from said printhead during said decelerating are received

by said waste ink receptacle,

wherein a length (L) of said waste ink receptacle, which is positioned to begin at a

15   predetermined location, is determined _by the formula:

$$L = [(Dgap / Vd) \times Vc] + (N/Dpi), \text{ wherein:}$$

Dgap is a gap distance from said printhead to a surface of said waste ink

receptacle;

Vd is a droplet velocity of ink droplets ejected from said printhead;

20   Vc is a carrier velocity of said printhead carrier;

N is the number of spit fires per nozzle; and

Dpi is the resolution.

17. (Original) The method of claim 16, said predetermined location being outside a print

zone of said ink jet printer, and in relation to an edge of a sheet of print media.

18. (Canceled)